*607. [The questioner (Shri Lalit Suri) was absent. For answer *vide* page 38].

*608. [The questioner (Shri Balavant ALIAS Bal Apate] was absent. For answer *vide* page 39].

Research on stem cells

*609. SHRIMATI SUKHBUNS KAUR: Will the Minister of HEALTH AND FAMILY WELFARE be pleased to state:

(a) whether Government have recognized.'Naturopath/ as a system of medicine;

(b) if so, whether guidelines governing qualification, classification and syllabus for the doctors of this system have been prepared; arid

(c) if not, whether there is any such scheme under consideration of Government?

THE MINISTER OF HEALTH AND FAMILY WELFARE (DR. ANBUMANI RAMADOSS): (a) to (c) A statement is laid on the Table of the House.

Statement

(a) to (c) Yes, Sir. The All India Institute of Medical Sciences is actively engaged in research and therapeutic procedure involving the use of various stem cells. The treatment offered at AIIMS is free to the patients so far. Since the procedures are carried out as part of overall research activity and are at initial stage, the exact cost per patient are yet to be worked out. There is also no.discrimination between the rich and poor, in providing this treatment and decision is made after careful evaluation of the specific needs of the patient.

SHRIMATI SUKHBUNS KAUR: Sir, I would like to congratulate the .hon. Minister for the poineering work done by the AIIMS. I would also like to congratulate the Director of AIIMS, Shri Venugopal, in whom we have a very dedicated doctor and an able administrator. I would like to know from hon. Minister as to how the Government plans to support and further enhance the stem cells intiatives in AIIMS in terms of manpower, funds and other means whatsoever.

DR. ANBUMANI RAMADOSS: Sir, the All India Institute of Medical Sciences, a poineer research institute in the country, has been carrying out various research projects, including the stem cell research. In the last so many years, they have been focusing on cardiac stem cells research,

research on eyes and pancreatic stem cell research. All this research is being done.

Sir, there are three types of stem cells. I would like, through you, Sir, to just enlighten the House about stem cells. There are three types of stem cells. One is the adult stem cell, found in the adult bone marrow, tissues and muscles. The second is the umbilican chord stem cells, found during delivery. There are stem cells in the umbilical, chord. The third is the embryonic stem cell; during the fifth and the seventh day, when the embryo is formed, you get those cells and you propogate those cells. So, there are these three types of stem cells.

In the case of embryonic stem cell research in the developed countries, they are facing a problem pertaining to ethical values because some of these embryonic cells could become cancerous cells in future by mutation. In the case of adult stem cells, there is no such problem. At AIIMS, the autologous cells, *i.e.,* patient's own cells, were injected just like blood transfusion. So, during a heart surgery, when the heart is opened, sternum cells are taken out, stem cells are identified, and then they were again injected indirectly into the heart muscles where, in certain patients, it started growing and their recovery was better than other patients. This research is still going.on in the All India Institute of Medical Sciences, including the Rajendra Prasad Eye Centre where the corneal cells are also used for research purposes.

The Government is very actively involved in propagating the stem cells research in the country because this is going to be a big future in the medicine, because in a short span of time, I am sure, Sir, the world over all the organs in the body could be grown to get treatment for diabetes, spinal chord problems, in muscular dystrophy and cancer. So, this is a huge initiative that the Government has taken through the Department of Biotechnology and the Department of Science and Technology. We are propagating this in a big way, nationally. We have put in a lot of resources in the All India Institute of Medical Sciences. They have formed a separate banking for these chord cells and other cells and we are propagating that and we are helping them in a big way.

SHRIMATI SUKHBUNS KAUR: Sir, the Minister has talked about embryonic stem cells. I would like to know whether they are going to have research in foetal and chord blood cells.

DR. ANBUMANI RAMADOSS: Sir, currently, embryonic stem cell research has been going on in five Government-authorised centres and

out of that only two are in human embryos and three in animal embryos. Since this is art ethical issue, we are looking at it very closely and we are monitoring that. But the chord blood cells, which are usually used for blood disorders, unlike embryonic stem cells which could be used to grow any organ in the body, but the umbilical chord cells today used only for blood disorders, and a lot of research has been going on in India. The Government is trying to bank these umbilical chord cells. Sir, we have roughly about 25 million childbirths a year. So, we could bank these umbilical chords and use them for future research purposes. The Government of India is trying to have a public-private partnership to bank these chord cells all over the country to use it for research purposes and also for initiatives.

SHRIMTI SUKHBUNS KAUR: Then hon. Minister has given a detailed account of the work being done in the stem cell research. It is true that the All India Medical Sciences, the doctors and researchers who have been working on the stem cells have made a major breakthrough. The work is a pioneering one and India is one of the leading countries, besides the U.K., which has made advancement in the stem eel! research.

SHRI ANAND SHARMA: Sir, I would like to draw the attention of the hon. Minister to the working conditions prevailing in the AIIMS, the premier health institute of the of the country. The conditions and the environment of the teaching block and research block are not conducive for a meaningful research. If you look at hygiene, you will find that the researchers and the top doctors are working in very cramped conditions. We are on the threshold of one of the biggest breakthroughs of the 21 st century. Would the hon. Minister consider taking a proposal to the Cabinet to have a dedicated centre, a dedicated division, linked to the AIIMS with a task force on stem cell research and also for embryonic cells. So far, it is confined to cardiology and also pancreas. Would you consider research for neurological purpose because in neurology, stem cells can be most beneficial. So, if that is also included, it would be helpful. So, we should take a decision in this regard now, so that India emerges as the leader in this field.

DR. ANBUMANI RAMADOSS: Sir, as I mentioned earlier, the All India Institute of Medical Sciences is a premier research institution in the country. Sir, due to the lack of other tertiary-care hospitals surrounding Delhi region in Uttar Pradesh, Bihar, Rajasthan, Haryana, a lot of patients are coming to Delhi for treatment. They are being referred to the AIIMS for specialised

treatment, and we can't turn them away at that point of time when the patients are due to get their treatment in the AIIMS. That is why we have a huge load of patients coming to the AIIMS. This is the reason, Sir, why the Government is taking up the six new AIIMS-like projects in the surrounding States. It would lessen the burden of patient load on the All India Institute of Medical Sciences.

Sir, there was some recommendation of the Parliamentary Standing Committee on the functioning of the AIIMS. In fact, they wanted an independent assessment also, how this could still be further improved, the functioning could be improved and more facilities could be put up. Sir, even before this Committee's recommendation, we were going in for a Mega Master Plan to expand the All India Institute of Medical Sciences to have more other facilities, we are going to have individual blocks for individual departments, like we are going to have a separate building for gynaecology or paediatrics. In that Plan, one special building for geriatrics has been proposed.

Sir, as far as embryonic stem cells are concerned, as I said earlier, we have to be very cautious in approaching these embryonic stem cells because it has got an ethical problem worldwide. We are looking very closely at that. We have the national ethical guidelines, but that has not still been enacted. So, in due course of time, we are going to enact the national ethical guidelines under which stem cell research guidelines also will be coming. Nevertheless, Sir, we will definitely try to propagate these researches. This being one of my favourite topics, I would personally propagate this stem cell research all around the country and internationally also.

SHRI P.G NARAYANAN: Mr. Chairman, Sir, stem cell transplantation is being used for treating blood cancer and other diseases for the past several years. But the cost of stem cell treatment is prohibitive; and it is beyond the reach of the common man. I would like to know from the hon. Minister whether the on-going research on stem cells in the All-India Institute of Medical Sciences would bring down the cost of treatment to help the poor cancer patients. Now, the transplantation and other treatment costs several lakhs.

DR. ANBUMANI RAMADOSS: Sir, in the All India Institute of Medical Sciences only the research is being done. For cardiac patients, this research was already being done in America. So, they have followed similar pattern of that research and they have been doing it here. They are not doing it

here for any commercial reasons. So, in the initial stages, we are going through an apprehensive phase of initial research being done by taking into values and all the guidelines of ethical issues into that. The patients are being researched with their consent. As I said earlier, they are told that it is their own stem cells. In fact, I have called a meeting during 18th to 20th of this month in Mumbai, that is going to be an international seminar, international conference on stem cells research where a lot of global partners are going to come to Mumbai, including the partners from developed countries and the eastern countries who are interested. In fact, we are trying to coordinate with the public-private partnership in this research, whether they are going to have bank facilities and whether we can promote a research centre. In All India Institute of Medical Sciences, Sir, in fact, in the last few days, we were discussing how we could have a parallel unit attached to the All India Institute of Medical Sciences, a centre of excellence, where the Government could pool in resources into that centre and coordinate with the All India Institute of Medical Sciences so that it can be a premier and reputed institute in the country. In the due course of time, I am sure, when the foundation stone is laid in India, according to proper ethical values and guidelines, I am sure, the cost could be brought down. But, as such, Sir, there is no commercialisation of stem cells.

PROF. P.J. KURIAN. Sir, the hon. Minister has said in his answer that the research on stem cells is part of the overall research activity and, also, that it is at the initial stage. Since the research in the stem cells being very important, why not we consider having a separate unit or cell on stem cell research? This is question number one. Secondly, since it is at the initial stage, I would like to know on how many patients this treatment has been done and what percentage of success you have. Thirdly, I would like to know, also, whether this research is purely indigenous. Since other countries are also conducting research on the stem cells, are we having collaboration with other countries, or it is purely done on indigenous line?

DR. ANBUMANI RAMADOSS: Sir, in the All India Institute of Medical Sciences, approximately 35 cardiac patients have been treated using autologous stem cells like I mentioned the procedure earlier. In fact, there is a wide difference of recovery in a good number of patients. At this moment, I am not able to say the exact percentage of the treatment part, but I will let the hon. Member know about that. Through you, Sir, I can inform the House that there has been a tremendous recovery. Previously, infected heart muscles were growing and there is definitely an improvement

in the research. As mentioned earlier, we are trying to help them out in propagating this research.

*610. [The questioners (Shri Surendra Lath, Shri Kripal Parmar) were absent. For answer *vide* page 39].

*611. [The questioner (Shri Laxminarayan Sharma) was absent. For answer *vide* page 41].

*612. [The questioner (Shri Varinder Singh Bajwa) was absent. For answer w'de page 41].

*613. [The questioners (Shri Ambika Soni and Shri Harish Rawat) were absent. For answer *vide* page 42].

स्वास्थ्य सेवाओं के संबंध में जांच

*614. श्री जनेश्वर मिश्र : क्या स्वास्थ्य और परिवार कल्याण मंत्री यह बताने की कृपा करेंगे कि :

(क) क्या सरकार ने राष्ट्रीय स्तर पर शहरी और ग्रामीण क्षेत्रों में स्वास्थ्य से संबंधित पहलुओं औश्र व्यवस्थओं/सुविधाओं के संबंध में कोई जांच कराई हैं;

(ख) यदि हां, तो तत्संबंधी ब्यौरा क्या हैं ;

(ग) ऐसे अस्पतालों की संख्या कितनी हैं जहां पर डाक्टर/स्टाफ तक नहीं हैं;

(घ) क्या सरकार ने उन क्षेत्रों में नई फैलती बीमारियों के संबंध में कोई अध्ययन कराया है; और

(ड़) भविष्य में इन क्षेत्रों में इन रोगों के निवारण तथा उनसे बचाव के संबंध में क्या उपाय किए गए हैं ?

स्वास्थ्य और परिवार कल्याण मंत्री (डा. अन्बूमणि राम दास) : (क) से (ड़) एक विवरण सभा पटल पर रखा दिया गया हैं।

(**विवरण**)

(क) और (ख) देश में दो चरणों (1998-99 और 2003-2004) में एक सुविधा सर्वेक्षण किया गया हैं जिसमें बुनियादी सुविधाओं अर्थात् पानी की सुविधा, बिजली, वाहन, आपरेशन थियेटर, प्रसव कक्ष इत्यादि और देश में प्राथमिक स्वास्थ्य परिचर्या संस्थाओं में स्वास्थ्य जन शक्ति की स्थिति का मूल्यांकन किया गया।

भारत में वृहद जनांकिकी और स्वास्थ्य डेटाबेस बनाने की दृष्टि से वर्ष 1992-93 दौरान राष्ट्रीय परिवार स्वास्थ्य सर्वेक्षण किया गया और वर्षे 1998-99 में इस सर्वेक्षण का दूसरा दौर चलाया गया।